ARCADIS of New York, Inc.
6723 Towpath Road
P O Box: 66
Syracuse
New York 13214-0066
Tel 315 446 9120
Fax 315 449 0017
www.arcadis-us.com

ENVIRONMENT

PCB Coordinator
U.S. EPA Region 5
Mailstop LU-9J
77 W. Jackson Blvd
Chicago, IL 60604

Subject:
GE Aviation – Altitude Test Facility
Data Summary of Fourteenth Air Sampling Event – August 2014

Date:
September 21, 2014

Dear PCB Coordinator:

On August 26, 2014, GE Aviation, an operating division of the General Electric Company (GE), performed indoor air testing activities at the Altitude Test Facility (ATF) at GE's facility in Evendale, Ohio, in accordance with EPA's January 16, 2014 amendment to EPA's December 19, 2012 approval allowing GE to use the ATF for jet engine testing pursuant to 40 CFR § 761.62(c). This report is being submitted pursuant to Consent Agreement and Final Order (TSCA-05-2014-0008) filed on April 28, 2014.

GE collected two indoor air samples at the ATF on August 26, 2014, following the completion of active jet engine testing in August 2014 and received the laboratory report containing the results on September 10th, 2014. One sample was "Non-Detect" for PCBs, and the second sample had estimated low but detectable results for PCBs, estimated at 26.1 nanograms per cubic meter (ng/m^3), well below the NIOSH standard of 1,000 ng/m^3. (Note that Non-Detect denote that analytes were not detected at concentrations greater than the laboratory practical quantitation limit - PQL.) Further details for the sampling event follow in the report and **Table 1**.

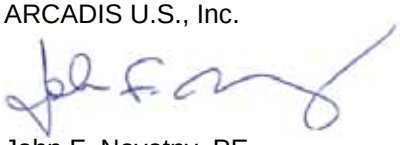
Air test sample ATF-AR-C44-07, located adjacent to the #44 Test Cell Chamber of the ATF, and air test sample ATF-AR-CR2-14, located on the second floor of the compressor room, were both collected over an 8-hour interval. The samples were collected on August 26, 2014, following the completion of routine jet engine testing activities. Both air pumps were placed in a manner such that the air sample would be collected from the breathing zone, in the room where equipment was in operation during engine tests. Both air pumps used for this event were programmed for a flow rate of 5.0 L/minute for a total run time of eight hours. Calibration and preparation of air samples followed Method TO-10A: Compendium of Methods for Toxic Organic Air Pollution. During the sampling event, a total volume of 2,400 Liters was pumped through each sample collection media.

The laboratory analytical results of the sampling event are provided in the Data Summary Table, attached as **Table 1** and the sampling locations are provided on the attached **Figure 1**. As indicated in the attachments, sample ATF-AR-C44-07 (collected adjacent to Test Cell #44) had "non-detect" levels of PCBs ng/m^3, and sample ATF-AR-CR2-14 (collected from the second floor ATF compressor room had an estimated detection level of PCBs of 26.1 ng/m^3. The laboratory quantitation limit (PQL) for these results was 41.7 ng/m^3, with a final extraction volume of 5.0 mL. The specific operating parameters of the analytical instruments used by PACE Analytical during sample analysis are detailed in **Attachment 1**.

Please do not hesitate to contact John Rumpf, Counsel for Environmental Affairs at GE Aviation, at (513) 243-4256 or Christopher Bell at Greenberg Traurig LLP at (713) 374-3556 if you have any questions.

Sincerely,

ARCADIS U.S., Inc.



John F. Novotny, PE
Senior Engineer

Attachments
Table 1
Figure 1
Attachment 1

Copies:
John Rumpf, GE
Christopher Bell, Greenberg Traurig, LLP

Table 1
Data Summary - PCB Air Monitoring - August 2014

GE - Aviation - Altitude Test Facility
Cincinnati, Ohio

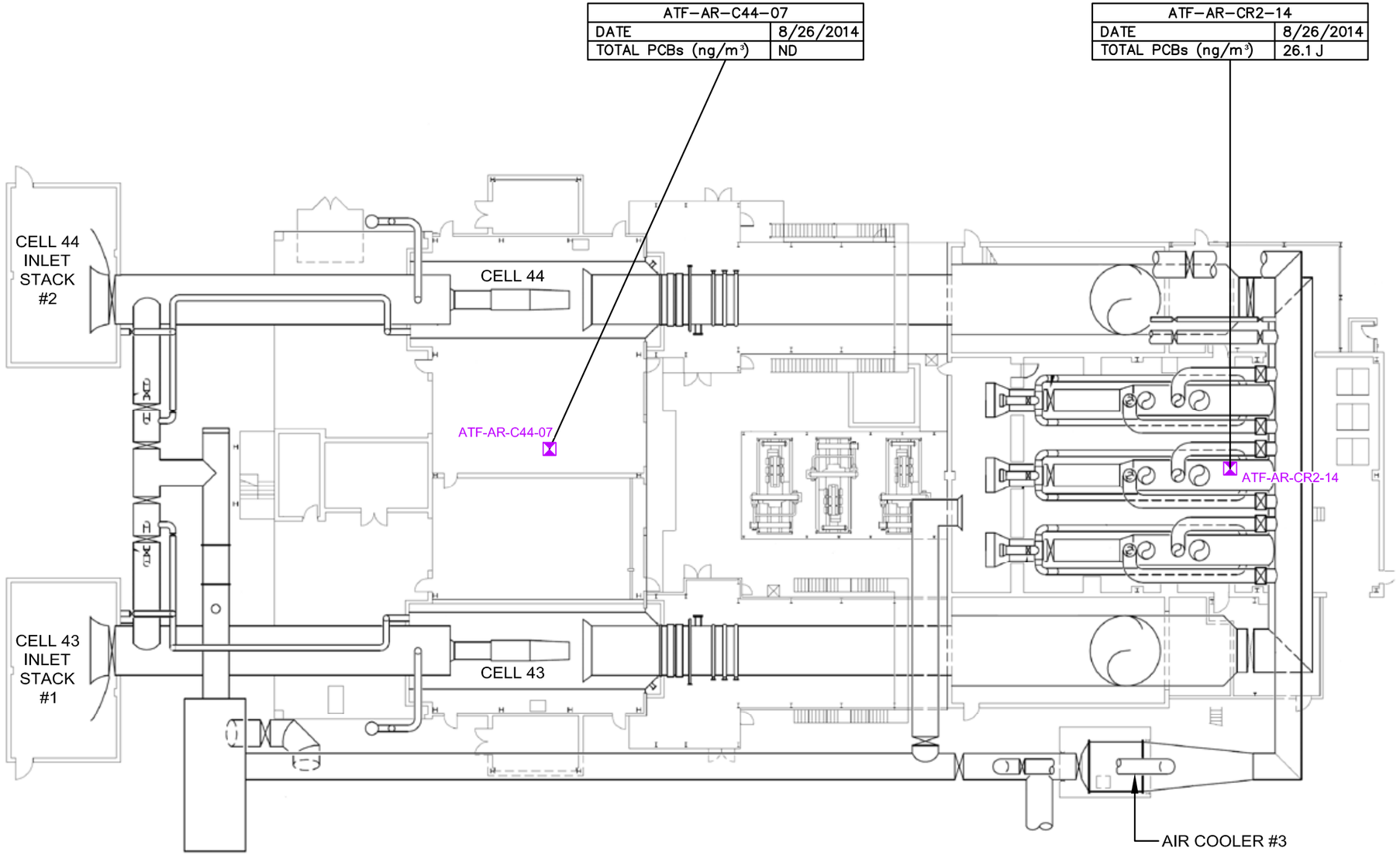
Sampling ID	Date Collected	Time Collected	Sample Type	Total PCBs (ng/m^3)	Location Description
Event 14					
ATF-AR-C44-07	8/26/2014	15:20	Air	ND	Test Cell 44 open floor area
ATF-AR-CR2-14	8/26/2014	15:30	Air	26.1 J	Second floor of ATF Compressor Room

Notes:

1. Samples collected by ARCADIS personnel and submitted to Pace Analytical Laboratory for analysis using USEPA Compendium Method TO-10A procedures.
2. Air pumps were set up at breathing zone height and operated over an 8-hour interval at an air intake rate of approximately 5 L/min, resulting in approximately 2,400 L of air pulled through the puff for each sample.
3. Event 14 took place at the ATF on August 26, 2014 conducting following to jet engine testing in August 2014.
4. Total PCBs - the sum of aroclors 1016 through 1268
5. The final extraction volume of 5.0 mL was conducted by the laboratory.
6. The initial injection volume of 1µL was conducted by the laboratory.
7. the Laboratory determined no sample breakthrough occurred on all sample media.
8. ND (Non-Detect) - Denotes analyte not detected at a concentration greater than the MDL
9. PQL (Practical Quantitation Limit) of 41.7 ng/m^3 per aroclor. Denotes lowest analyte concentration reportable for the sample.
10. Time Collected, denotes the time which the air pumps completed the 8-hour run interval.
11. J - Denotes an estimated concentration. The concentration result is greater than or equal to the Method Detection Limit (MDL) but less than the PQL.

Abbreviations:

ATF - Altitude Test Facility
AR - PCB air sample
C44 - Test Cell #44
CR2 - compressor room-second floor
PCBs - polychlorinated biphenyls
ng/m^3 - nanograms per cubic meter



NOT TO SCALE

LEGEND:

- ⊠ AMBIENT PCB AIR MONITORING LOCATION

SAMPLING NOMENCLATURE:

ATF – ALTITUDE TEST FACILITY

AR – PCB AIR SAMPLE

C44 – TEST CELL #44

CR2 – COMPRESSOR ROOM SECOND FLOOR

NOTES:

1. SAMPLING LOCATIONS ARE APPROXIMATE.
2. ng/m³ – NANOGRAMS PER CUBIC METER
3. TOTAL PCBs – THE SUM OF AROCLORS 1016 THROUGH 1268.
4. J – DENOTES AN ESTIMATED CONCENTRATION. THE CONCENTRATION RESULT IS GREATER THAN OR EQUAL TO THE METHOD DETECTION LIMIT (MDL) BUT LESS THAN THE PQL.

GE-AVIATION
CINCINNATI, OHIO
AIR TEST SUMMARY REPORT

DATA SUMMARY - PCB RESULTS AMBIENT PCB AIR MONITORING

ARCADIS

FIGURE 1

GC #: **GC-21 8082 High Level Method HYDROGEN**
Method: **Method 3**
Column: **GC21F ZB-1MS 20M 0.18mm 0.18um**
GC21B ZB-5 20M 0.18mm 0.18um
Date: 2/15/2013
Analyst: JKA
File Name: C:\Users\KELLYH~1.NOR\AppData\Local\Temp\XPgrpwise\[GC21_Parameters_1.xls]8082 H2 HL

Sample Delivery: SEE LEAP PARAMETERS

Column Oven:

Step	Temp (°C)	Rate (°C/min)	Hold (min)	Total (min)
Initial	150	-------	1.41	1.41
1	290	17.5	0.65	10.06

Stabilization Time (min): 0.50

Injector: Front CP-1177

1177 Oven Power: ON
1177 Temperature (°C) 300

Time	Split State	Split Ratio
Initial	ON	35

Injector: Middle CP-1177

1177 Oven Power: ON
1177 Temperature (°C) 300

Time	Split State	Split Ratio
Initial	ON	35

Flow/PSI(Front EFC, Type 1):
Carrier Gas : Helium

Step	Pres (psi)	Rate (psi/min)	Hold (min)	Total (min)
Initial	*	-------	10	10

Constant Flow Mode Enable: NO
Column Flow Rate (ml/min): 2.3

Flow/PSI(Front EFC, Type 1):

Step	Pres (psi)	Rate (psi/min)	Hold (min)	Total (min)
Initial	*	-------	10	10

Constant Flow Mode Enable: NO
Column Flow Rate (ml/min): 2.6

Detector: **Front ECD**

ECD Oven Power: ON
Temperature (°C) 300
Electronics: ON
Range: 1

Time	Range	Autozero
Initial	1	YES

Front ECD Adjustment
Time Constant: Fast
Cell Current: CAP
Contact Potential (mV): *

Middle ECD

ECD Oven Power: ON
Temperature (°C) 300
Electronics: ON
Range: 1

Time	Range	Autozero
Initial	1	YES

Fast
CAP
*

*values may change with use

Front ECD Adjustments
Make-up Flow (mL/min) 30

Middle ECD Adjustments
Make-up Flow (mL/min) 35

Analog Output

Detectors: Front: ECD Attenuation 1
Middle: ECD Attenuation 1
Rear: None

Time	Signal Source	Attenuation
Initial	Front Detector	1
Time	Signal Source	Attenuation
Initial	Middle Detector	1
Time	Signal Source	Attenuation
Initial	Rear Detector	1

Valve Table:

Time	1 None	2 None	3 None	4 None	5 None	6 None	7 None
Initial	-----	-----	-----	-----	-----	-----	-----

Initial valve state=Off